

SILVER AND BORAX:

THE WADSWORTH AND COLUMBUS FREIGHT ROAD



Freighting to Rawhide.

Silver and Borax: The Wadsworth and Columbus Freight Road

2007

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Cover: Freight team on the way to Rawhide, Churchill County, circa 1907-08 (Nevada Historical Society).



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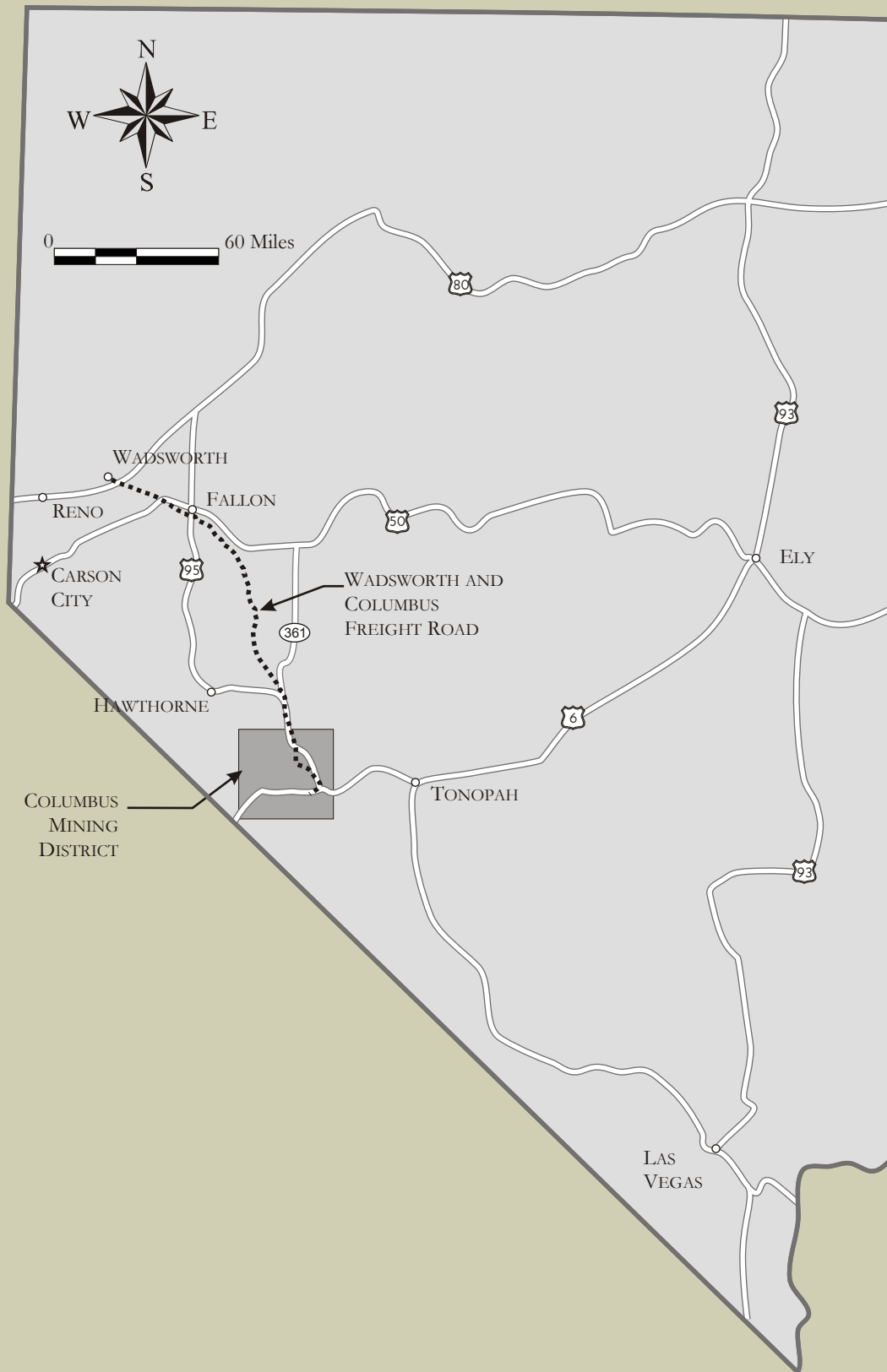
INTRODUCTION

The distant sound of harness bells, sending a warning ahead on the one-lane road, catches your attention first. A bullwhip cracks, and a piercing voice shouts commands. You look up to see a procession of wagons and animals, one hundred feet long. The animals—half a dozen or more pairs of mules—pull three massive freight wagons hitched one behind the other. The mules move steadily, working hard, but alert, their ears perked up. On another day, these might be oxen, heads down, plodding dutifully forward like an irresistible force. As they pass, grunts and snorts rise to accompany the jangle of the harness bells. Steel-rimmed wheels grind against the rocky roadbed, and the wooden wagon frames creak and groan with the weight of their cargo. The animals raise clouds of dust with every step, which mix with the smells of working livestock and linger until the breeze clears the air. In a few minutes, the team and wagons have moved on, becoming a dot in the empty landscape.

Freighters like these were a common sight in 1870s Nevada. The roads they followed were rudimentary by modern standards, marked by a welter of hoofprints and wagon tracks winding like ribbons in the dirt, but they were the lifelines of the mining economy. The wagons with their straining teams and cursing, whip cracking teamsters brought vital supplies and equipment to Nevada's mining districts, and returned carrying the products of those mines to market. This is the story of one such road—the Wadsworth and Columbus Freight Road—and its place in Nevada history.

The Wadsworth and Columbus Freight Road was a 130 mile long wagon road between Wadsworth, on the Truckee River, and the Columbus Mining District, located in the deserts of southwestern Nevada (Map 1). From 1871 to 1882, teams of oxen and mules pulled freight wagons from Wadsworth station on the Central Pacific Railroad to the mines, mills and towns of the Columbus District. These wagons carried the tools, machinery, and supplies needed to produce silver bullion from the District's Candelaria Hills, and returned laden with borax from the salt marshes in the valleys surrounding them.

The working life of the Wadsworth and Columbus Freight Road was short—slightly more than 10 years—but it showed how something as basic as hauling goods from one place to another changed and evolved, often very quickly. The Wadsworth and Columbus Freight Road came into existence because of one railroad, and it fell out of use because of another. But without it, the riches of the Columbus District—its silver and borax—would have remained untouched in the salt marshes or locked in rock deep underground.



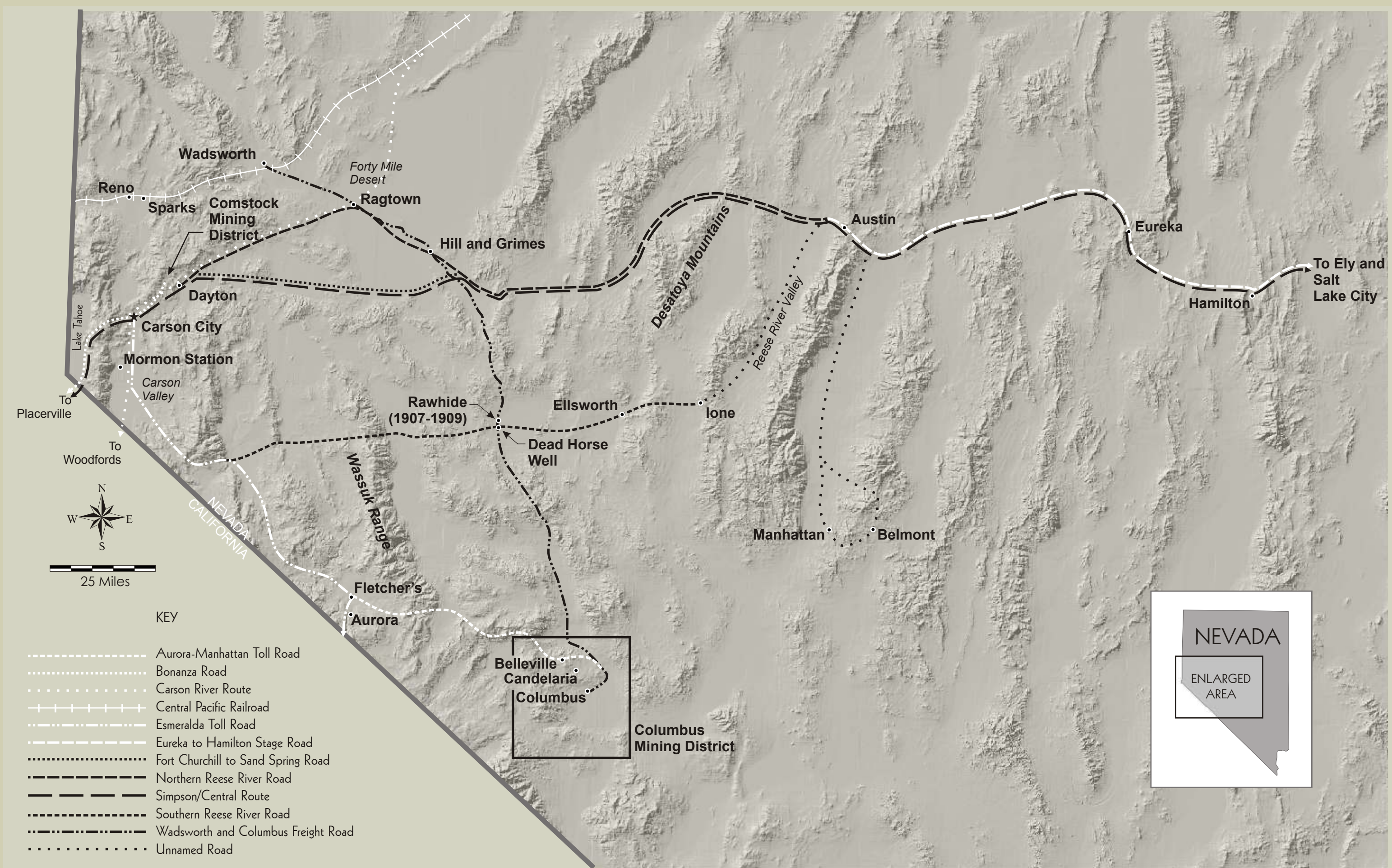
Map 1. The Wadsworth and Columbus Freight Road.

THE CENTRAL PACIFIC RAILROAD SETS THE STAGE

In the winter of 1867, crews constructing the Central Pacific Railroad—the western half of the transcontinental railroad—cleared the Sierra Nevada Mountains and crossed into Nevada. At the time, freight wagons and stagecoaches made their way among Nevada's towns and mining camps along a spiderweb of wagon roads and trails (Map 2). Some had evolved from the emigrant trails of the 1840s, and others were new routes to the state's far flung mining camps. In the early 1850s, merchants established trading posts along the emigrant trails at places like Carson Valley's Mormon Station, or Ragtown, at the southern end of the Forty-Mile Desert. The traders stocked their posts with supplies brought from California, or traded livestock with the emigrants, exchanging rested and recuperated animals for the next group's exhausted stock. The California connections were soon improved, and by 1858 a "first class" stage road linked Placerville and the Carson Valley. In 1859, Captain James Simpson surveyed a wagon road across Nevada, from Camp Floyd, south of Salt Lake City, to the Carson Valley (Map 2). Simpson's "Central Route" quickly became a major travel corridor for the continuing stream of emigrants and the Pony Express and Overland Stage.

Mining became the driving force of the Nevada economy in 1859, with the discovery of the Comstock Lode. The Comstock set the pattern for transportation which was repeated time after time as the search for precious metals expanded into remote and previously unexplored territory. The Comstock strike developed quickly from prospecting, placering, and tunneling by a handful of miners to industrial-scale underground mining. This required a massive support system to build and maintain the mines, process the ore, and feed, house, and amuse the throngs of miners, mill workers, and others—blacksmiths, clerks, bartenders, schoolteachers—who flocked to the area. Almost all of it had to be brought to the Comstock on the "Bonanza Road" over the high passes of the Sierra Nevada Mountains. The endless list of industrial machinery, wood and lumber, fruit and vegetables, whiskey (and the ornate bars over which it was served), clothing, and even picks and shovels all came from California. The successful districts also demanded stage, mail, and telegraph communication for everything from bringing in expert mining engineers to keeping distant stock markets apprised of the latest developments in the mines.

A working mining district needed a different kind of road than the early travelers, or even the first prospectors. Finding gold or silver was only the beginning. The ore had to be mined, the valuable minerals extracted, and the bullion taken to market. And all this had to be done at a



Map 2. Western Nevada Mining Camps and Freight Roads, 1860s - 70s.

profit, or the enterprise failed. The survival of entire mining districts often depended upon how easily people, goods, and bullion could get in or out.

Emigrants typically made a one-way trip across the continent. They needed a simple road along the easiest route—no more than a way through the trees or around the boulders or rough terrain that might injure their livestock or damage their wagons. The freighters and stage drivers bringing supplies and passengers to the mining camps on a regular basis had a different set of requirements. Their roads not only had to stand up to constant use, but they needed to avoid steep climbs which would overtax their teams. Freight roads had to be engineered to eliminate sharp curves, since the large teams could not turn sharply without tangling or slacking their traces, and they needed to include pullouts for wagons to pass in opposite directions or overtake one another.

As prospectors and miners fanned out across Nevada in the early 1860s, the main transportation corridor extended east along James Simpson's Central Route. Supplies originating in San Francisco or Placerville came into the region through the Comstock and Carson City area, and ore and bullion from the mining districts went out the same way. As the major strikes turned into more ambitious undertakings, demanding more supplies and equipment, freight roads followed close behind (Map 2). Discoveries in the Reese River District led to the incorporation of Austin in 1864, and the construction of the Reese River Road. There was not only a "rush" to the mining area, but an equally excited rush to profit by delivering desperately needed goods to potential customers. One writer on a horseback trip between Virginia City and Austin counted "274 freight teams, nineteen passenger wagons, three pack trains, sixty-nine horsemen, and thirty-one footmen between Austin and Virginia." Myron Angel's History of Nevada reports that in 1865 the Overland Mail Company "carried between Virginia City and Austin 5,840 passengers." Other freighters accounted for 7,620 tons of merchandise, machinery, and lumber during this same year. The Central Route continued east of Austin, to Eureka and Hamilton, with further connections to Salt Lake City. Other roads branched north and south of the main corridor, as more discoveries were made. The Manhattan District, for example, was organized in 1866 and connected by freight road to Austin, 60 miles away.

The transcontinental railroad brought fundamental changes to this network. Construction on the Central Pacific reached the future site of Wadsworth in the spring of 1868, and little more than a year later joined the Union Pacific at Promontory Point, Utah. This new east-west railroad along the Humboldt River carried freight and passengers far faster and more efficiently than the wagon roads. The Central Route was not abandoned, but its time as the major cross

Figure 1.
Wadsworth rail
yard, circa
1869.

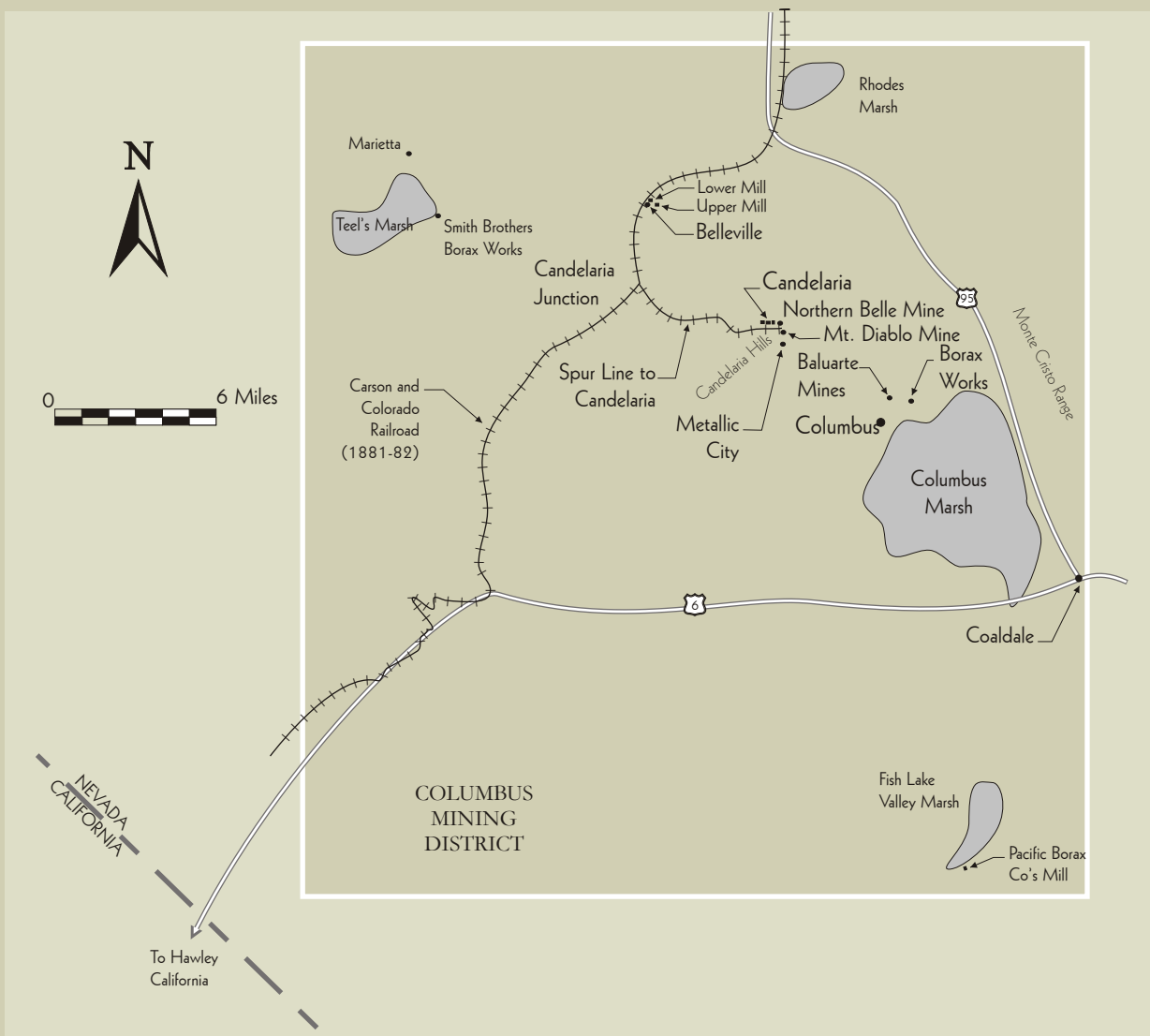


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country transportation route through Nevada was over. The Overland Stage and Telegraph, in fact, went out of business immediately after the completion of the railroad. The Central Pacific did more than draw off long distance travel and freight. It changed the way goods and people moved in and out of Nevada's interior. Freight could now be shipped to one of many stations along the railroad line, transferred to wagons, and then shipped on freight roads north or south to its destination. The same held true for ore, bullion, or anything else making the return trip. The Wadsworth and Columbus Freight Road linked the Wadsworth Station on the Central Pacific with the Columbus Mining District in just this way, along a route not feasible until the railroad was built. Supplies and equipment traveled south to the mines, mills, and towns, while the district's production flowed north, to the railroad, the rest of the nation, and markets throughout the world.

SILVER AND BORAX

The Columbus Mining District comprised an extensive area centered on the Candelaria Hills, and bounded by Rhodes Marsh on the north, Teel's Marsh on the west, Fish Lake Valley to the south, and the Monte Cristo Range to the east (Map 3). Mexican prospectors made the first silver discoveries, and area newspapers began carrying glowing descriptions of the Columbus strikes. The Esmeralda Union, published in Aurora, described a vein of silver "about nine feet in thickness, and . . . surprisingly rich. We are informed upon what seems to be reliable authority that a piece of quartz about the size of a common flour barrel, and half silver, has just been taken from the shaft." The writer confessed basing the article on second hand information, but in true gold rush fashion it, along with other rumors, provoked a flurry of



Map 3. The Columbus Mining District (after Candelaria and its Neighbors, Hugh Shamberger.)

prospecting and claim-staking. A mining district was organized in August of 1864, with officers selected and rules laid down for establishing claims and resolving disputes. This burst of activity was short-lived, as reports and rumors of other promising regions lured prospectors away to the next great strike. Mining in the Columbus District also had its share of difficulties. The nearest assay office—a vital service in evaluating any new discoveries—was 48 miles away in Aurora, and despite the initial glowing accounts, the district's chemically complex ore proved difficult to refine. The area also lacked water and stands of timber to fuel the steam powered mining and milling machinery. Prospectors abandoned most of the original claims in the Columbus District within a year or two, moving on rather than making the \$100 per year of improvements required to keep their claims.

When the Central Pacific reached Wadsworth in 1868, the Columbus District boasted a modest collection of mines and mills. The miners who persevered after the initial strike re-filed on the old discoveries, or absorbed them into larger claims. The town of Columbus had been founded in 1865, at the north end of Columbus Marsh, and became the site of Colonel Samuel Young's four-stamp quartz mill which refined ore from the nearby Baluarte Mine. Shallow wells supplied water for the town and mill, and the marsh provided an abundant source of salt, an important chemical for processing ore. Pinyon and cedar in the White Mountains, about 20 miles southwest of town, provided fuel.

The Nevada State Mineralogist, H.R. Whitehill, visited the Columbus district in the summer of 1871, gathering information for his biennial report to the State Legislature. He reported little work in the Columbus District prior to 1870. In that year, and in 1871, the Northern Belle, Mt. Diablo, and Baluarte mines began producing "good ore." The Wheeler Survey (see side bar) listed three working mills at Columbus in 1871, along with stores, hotels, livery stables and hay yards, blacksmith shops, saloons, billiard rooms, and private residences. Columbus' population grew from 200 in 1866 to approximately 450 in 1871.

Mr. Whitehill also made an extremely optimistic assessment of the district's borax marshes. He stated, "the richest and most extensive deposits of the salts of borax yet discovered in any part of the world are found in the vicinity of Columbus. Columbus, Fish Lake, and Teal's Marshes alone contain twenty thousand acres of this land, which will yield an unlimited supply for an indefinite period."

William Troop first discovered borax at Columbus Marsh in 1871, and Francis Marion Smith developed the Teal's Marsh deposits in 1872, hiring Chinese to work in his processing plant. Smith later became known as "Borax" Smith, because of his prominence in the industry. Other



Figure 2. Belleville circa 1870s, with the Upper Mill in the foreground and Lower Mill in the background.

Special Collections, University of Nevada-Reno Library

Figure 3. Freight wagons and oxen team in the Belleville business district, circa early 1870s.

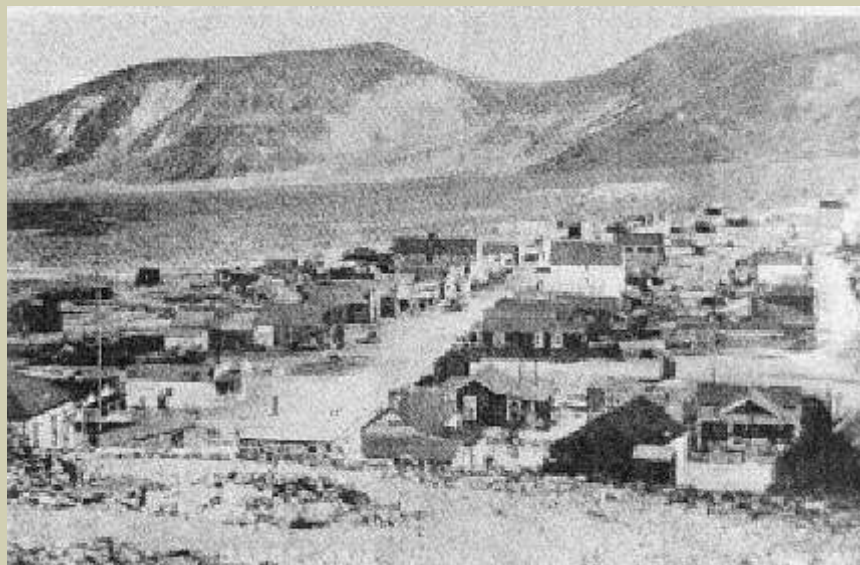


Special Collections, University of Nevada-Reno Library

Columbus borax operations in 1871 included the Pacific Borax Works facility which, according to Mr. Whitehill, concentrated crude borax for shipment to San Francisco for further refining. By 1873-74, the State Mineralogist reported production from the four Columbus district marshes—Teel's, Rhodes, Columbus, and Fish Lake—totaling as much as seven tons per day.

Silver production from the Columbus District was also on the upswing in 1873, with the discovery of rich veins of ore in the Northern Belle Mine. The Northern Belle's Lower Mill was built in 1875, and the Upper Mill began processing ore in 1876 (Figure 2). These twenty-stamp mills combined to work as much as twenty-five tons of ore per day, compared to the seventeen tons of the earlier Columbus mills. The town of Belleville was founded in

Figure 4. Candelaria
in 1876.



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1873, at the site of the Northern Belle milling operations, and Belleville's population reached about 500 during its most prosperous years between 1873 and 1876. The Northern Belle operation remained the mainstay of the district, employing 150 men in 1880.

Candelaria and Metallic City were platted in 1876, about six miles southeast of Belleville (Map 3), as residential communities for the Northern Belle miners. Their populations grew at the expense of Columbus, being closer to the Northern Belle Mine and the Belleville mills. Within a month of its founding, Candelaria had a post office, four stores, two hotels, eleven saloons, one restaurant, and a livery stable, and in 1880 its population had grown to 900.

The 1870s saw the full development of the Columbus District silver mines. The Baluarte, Northern Belle, and Mt. Diablo produced an estimated \$15,500,000 worth of bullion by the end of major operations in the early 1890s. The ten years beginning in 1873 also saw Nevada become the leading source of borax in the world. The Columbus, Teels, Fish Lake, and Rhodes Marshes produced the huge quantities of borax required for its transformation from an obscure commodity to an industrial and household product known and used worldwide. But even the richest silver mine was worthless without the proper equipment to follow the veins deep underground and extract the precious metal from the rock once it was brought to the surface. Nor was there any point in creating a worldwide demand for a new type of consumer product unless it could be produced by the ton, transported economically, and then refined, packaged, and distributed.

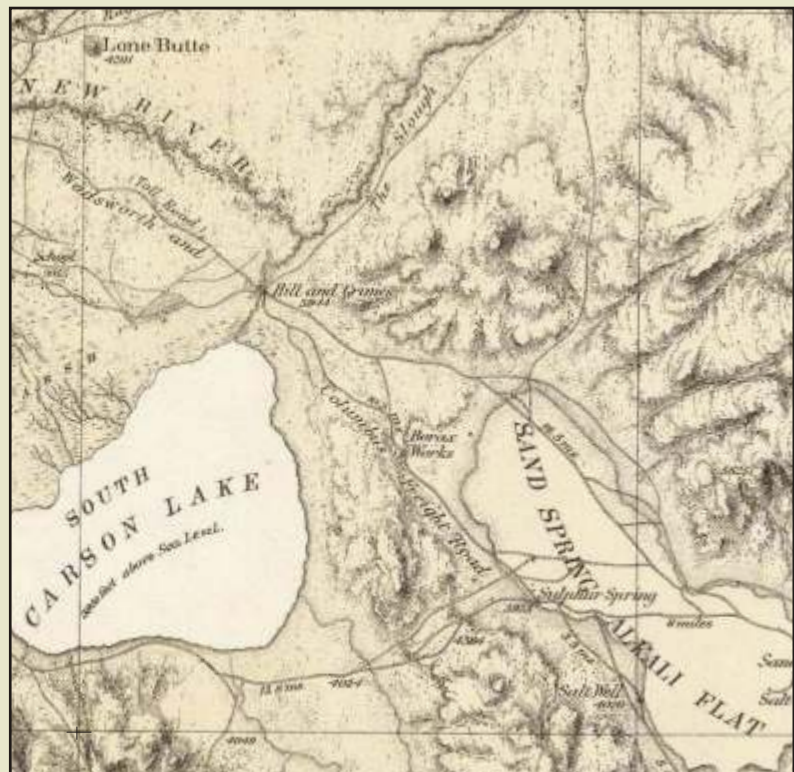
The Wheeler Survey

The Wheeler Surveys were a series of mapping expeditions conducted by the U.S. Army between 1871 and 1879, and led by First Lieutenant George M. Wheeler. Their objective: to explore and map the country west of the 100th Meridian—in other words everything west of central Nebraska. They actually focused on the American Southwest, but covered vast amounts of territory nevertheless. The expeditions produced detailed topographic maps showing roads, farms, towns, and other features which reflected the army's concern for settlement and security in the West, as well as descriptions of geology, wildlife, plants, and even fossils.

The 1871 Wheeler expedition included a visit to the Columbus Mining District, and in 1876 the survey parties covered the area from

Wadsworth east to the southern end of the Desatoya Mountains (Map 2). The map of that year's work included the Salt Wells area, and shows the Wadsworth and Columbus Freight Road running along the northeast side of the Bunejug Mountains, and south along the western edge of the Sand Springs Range (Map 4). The notes of Party No. 4 of the 1876 expedition, under Lieutenant R. Birnie, Jr., describe travel on the Wadsworth and Columbus Freight Road between Ragtown and the Hill and Grimes station, near today's Grimes Point. They traveled east to Austin from that point, then south and west to rejoin the Wadsworth and Columbus Freight Road at Dead Horse Well (Map 2). They mapped the road north from Dead Horse well, apparently continuing as far as Hill and Grimes.

Map 4. 1876 Wheeler Survey Map showing the Wadsworth and Columbus Freight Road.



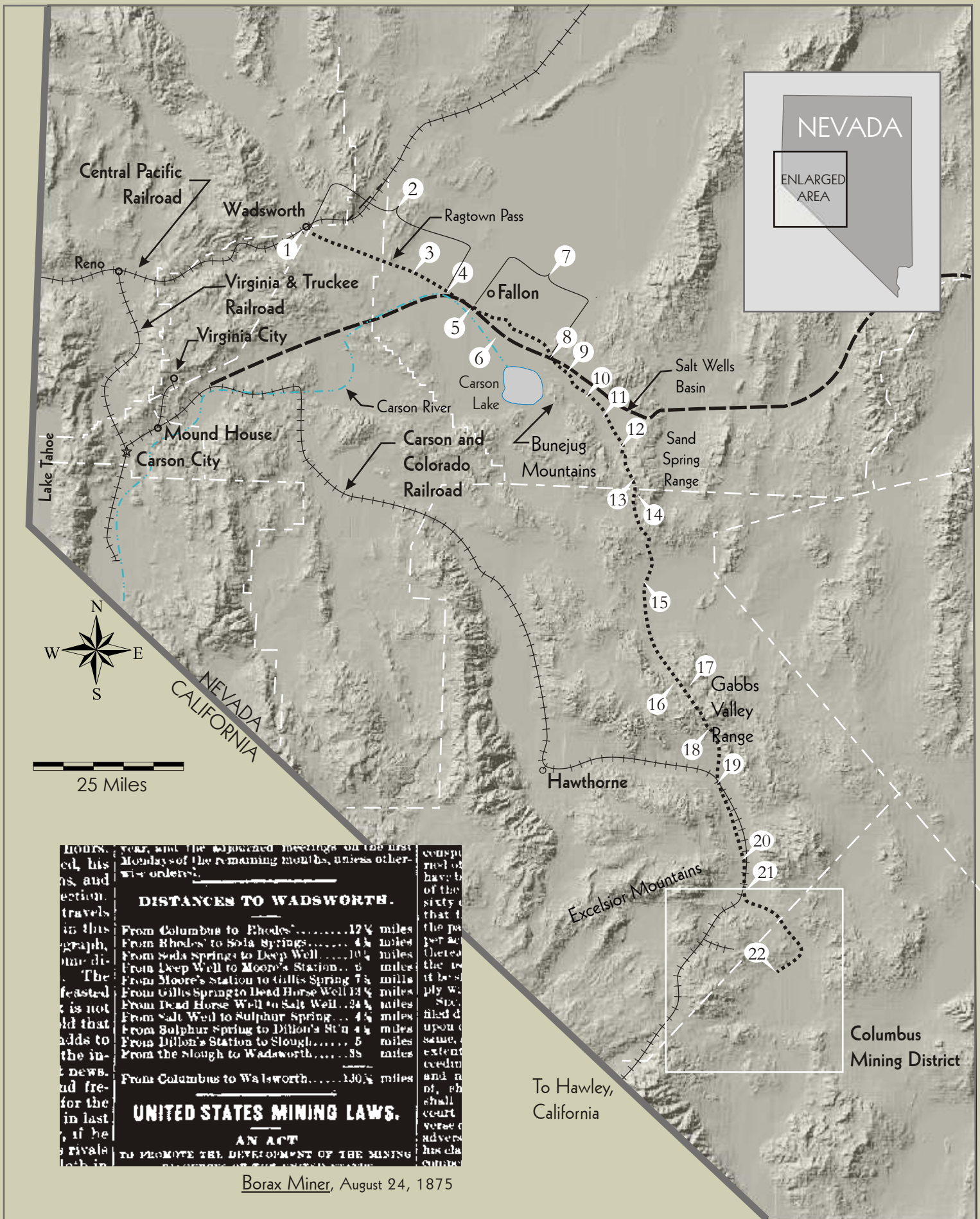
David Rumsey Map Collection, www.davidrumsey.com

FREIGHT IN, BORAX OUT

Wadsworth was the nearest, most accessible point on the Central Pacific Railroad to the Columbus Mining District (Map 5). The historic record does not pinpoint the decision to build the Wadsworth and Columbus Freight Road, but it appears a working road was in place by the summer of 1871. The profits in freighting from Wadsworth to the mining districts of southwestern Nevada were obvious, even as the rail line emerged from the Sierra Nevada. In May of 1868, Ephraim Clark blazed a primitive road between Wadsworth and Ragtown by hooking a log between two wheels and dragging it the length of the intended route (Map 5). Travel on Clark's Toll Road commenced in June. East of Ragtown, G. B. Smith built a segment of road paralleling the existing Reese River Road, which followed the curve of the Carson River, to Hill and Grimes (Map 5). Smith's Toll Road led more directly to the station and toll bridge at Hill and Grimes, and he intended to draw business away from the Reese River Road. Both these new roads predated the 1870s boom in the Columbus District, but their builders were anticipating an increase in traffic heading southeast from Wadsworth, and their roads eventually became part of the Wadsworth and Columbus route.

The Wheeler Survey report for field work in the summer of 1871—while not mapping a Wadsworth road—includes a description of the Columbus Mining District, and mentions Wadsworth as the nearest railroad station “one hundred and thirty-three miles distant.” The cost of freight to and from Wadsworth was from four to five cents per pound (\$80-100 per ton). The 133 mile distance is very close to the length—130 ½ miles—of the Wadsworth and Columbus Freight Road subsequently reprinted in local newspapers (Map 5). The 1870-71 report of the State Mineralogist refers to a stage road connecting Carson City and Columbus, via Aurora, and does not specifically mention a freight road. However, Mr. Whitehill does say in discussing borax that hauling it to the railroad (presumably Wadsworth) costs eighty dollars per ton. The May 11, 1872, issue of Reno's Nevada State Journal notes in an article on Wadsworth that over the past several months more freight than ever before had been received at the railroad depot, and was being loaded for transportation to Columbus, Belmont, Lone, Ellsworth and other points south, indicating a busy road in place by the first few months of 1872.

The Borax Miner ran the most specific early reference to the “Wadsworth and Columbus Wagon Road” during 1875. This newspaper, published weekly in Columbus from 1873 to 1877, regularly reprinted an announcement of toll charges on the road, originally dated December 13, 1873, under the name A. J. Holmes, Superintendent (Figure 5). This indicates a toll road existed as of December, 1873, but it is not known if these were the



Map 5. The Wadsworth and Columbus Freight Road, Way Stations, and Railroads. Refer to following page for Map Key.

Freight Road Route and Way Stations

1 Wadsworth Shipping point on the Central Pacific for supplies to the mining districts in southwestern Nevada.

2 Clark's Toll Road Perhaps anticipating the need for a freight road to the Columbus District, and other points south, Ephraim Clark blazed a road between Ragtown and Wadsworth in May, 1868, by dragging a log along the planned route, then constructing a toll road.

3 Desert Well Watering stop.

4 Ragtown Once a major station on the Carson River Route of the California emigrant trail. Forage could be purchased here.

5 St. Clair Station Corrals, hotel and a toll bridge over the Carson River. Built in 1864 as a station on the Reese River Road.

6 Reese River Road The Reese River Road went from the Carson City / Virginia City area to Austin. This segment crossed a toll bridge at Hill and Grimes (then called Redman's or Waller's), and continued east to the Reese River District along the northern side of Sand Springs Flat.

7 Smith's Toll Road Built in 1868 between Willow Station (southeast of St. Clair Station) and Hill and Grimes. This was a shorter route than the Reese River Toll Road segment, and was meant to take business away from it.

8 Hill and Grimes Ranch and toll bridge, located on the "Slough" branch of the Carson River. The Wheeler Survey party noted "good grazing" here.

9 Dillons Station Nothing known of this station, other than its listing in "Distances to Wadsworth."

10 Sulphur Spring Also known as Rock Springs. Water available but no wood or grass. Rock Springs was also a station along the Sand Springs Road and the Pony Express trail.

11 Salt Well The well water here was not fit for drinking. Water had to be hauled from near Sulphur

Springs. Salt Well might also have been a station on the Sand Springs Road.

12 Cox's Station No wood or water available. Water was hauled from Sulphur Springs. Also known as Wightman Well, and Winter Sheep Camp, or Hunts.

13 Summit No wood or water available here, and little grazing. Water was hauled from Sulphur Springs. The station is located on the divide at the head of Fourmile Canyon.

14 Deep Hollow No wood or water available. Water was hauled from Dead Horse Well.

15 Dead Horse Well At the intersection with southern Reese River Road, which went west around the upper end of Walker Lake and on to the Comstock and Carson City, and east to Ellsworth. The station was built in 1872, and supplied water to Rawhide during its brief 1907-09 boom. Dead Horse Well was also the site of a small milling operation during the 1930s and 40s, and a bar, which burned in the early 1950s.

16 Midway Not mentioned on the Borax Miner's list of stations on the "Distances to Wadsworth" column, although modern researchers have identified several rock structures at the location.

17 Gillis Spring Marked by remains of stone walls.

18 Moore's Station Also known as Benton's Spring or Benton's Fort. Marked by stone ruins.

19 Deep Well The modern town of Luning is located at the site of this station.

20 Soda Springs Presently Sodaville on US Highway 95.

21 Rhodes Marsh Borax was produced from Rhodes Marsh by 1873-74, though there is no information regarding location of a station at the marsh.

22 Columbus This town and Belleville and Candelaria were the major destinations of the freight road.

The route and way station locations are approximate. They are based on descriptions from the Borax Miner's "Distances to Wadsworth" column, the Wheeler Survey report, and modern research, including McGee Station by Roberta Childers, Candelaria and Its Neighbors, by Hugh Shamberger, and The Wadsworth/Columbus Freight Route, by William C. Davis.

original charges at the opening of the road, later updates, or if the toll road was even the first road to connect Wadsworth and the Columbus Mining District. An intriguing item found in the Nevada State Journal's "Remember When" column mentions the builders of a Wadsworth to Columbus wagon road asking their backers for more money to complete their project. The note appeared in the July 10, 1943, issue, under the subheading "70 Years Ago." The original article comprised three lines: "The builders of the Columbus Wagon Road call on their backers for more coin to complete the enterprise." It ran in the July 19, 1873, issue of the newspaper. Most likely, freighters were making their way as best they could from

Figure 5. The Columbus and Wadsworth Wagon Road toll charges.

THE COLUMBUS AND WADSWORTH WAGON ROAD.	
FROM AND AFTER THIS DATE AND until further notice, the following rate of tolls will be collected on this road:	
Two Animals and one Wagon or Buggy.....	\$1 50
Each additional span of Animals.....	50
Each additional Wagon.....	1 00
Saddle Horse.....	25
LIVESTOCK.	
Horses and Cattle, per head.....	5
Sheep and Hogs, per head.....	2 1/2
A. J. HOLMES, Supt	
Columbus, Nev. December 13, 1873. d13-14	

Wadsworth to Columbus by the summer of 1871, or earlier, but they had to wait two more years for a proper toll road.

No matter when the first freight wagons made the trip south from the railroad, by 1873 the Wadsworth and Columbus Freight Road was the lifeline of the Columbus District. The community followed freight road activity closely, with arrivals and departures reported in the news like steamships coming and going in a port city. A regular "Teams" column in the Borax Miner listed the names of teamsters or freight outfits coming into the district, their cargo, and their departure and outgoing loads. A typical example, from April of 1875:

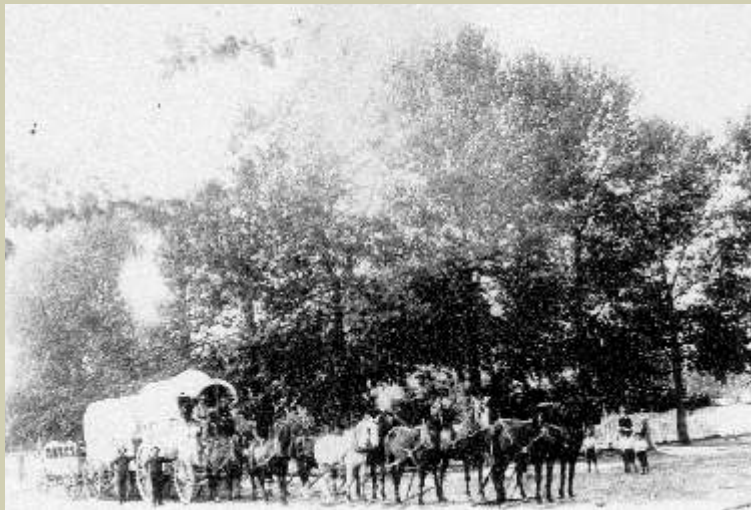
Teams.—A. Canyon crossed from Belmont and loaded with borax at Teel's marsh for Wadsworth. . . Billy Pearson also loaded borax at Teel's marsh for Wadsworth. . . One of the Olinghouse teams brought merchandise to Columbus and took out return load of borax from Griffing & Wyman's works at Fish Lake to Wadsworth. . . Two of Travis & Pittman's teams arrived from Wadsworth with merchandise for Columbus and lumber for the Pacific Borax Company; both of these teams will take return loads from the Pacific works.

The "Teams" column between March 1875 and December 1876 shows the road carrying a steady, but not excessive amount of traffic. The columns mention almost 30 different teams and freighters plying the road. A Borax Miner article of November 25, 1876, described the

Wadsworth and Columbus freighting business as consisting of “twenty-eight sixteen-mule teams regularly employed.” An August, 1876 article in the Nevada State Journal on Wadsworth mentioned twenty-five three or four wagon teams, each carrying from 25,000 to 30,000 pounds, hauling a total of over three hundred tons a month. A few years later, a February, 1881 article in The True Fissure (a weekly newspaper published in Candelaria between 1880 and 1886), listed 12 different freighters employing 48 wagons between Wadsworth and Belleville. The 1875-76 period probably represented heavy use of the road, since borax production was at a high, and the two Northern Belle mills in Belleville were under construction. The April 22, 1876, column noted “Two of the Olinghouse teams came into Belleville loaded with portions of the new Northern Belle mill.”

Two to five teams typically came and went each week, and others possibly passed through unreported. Some articles described heavier traffic, with teams “lined up” on the Wadsworth road, although these may have been exaggerations, or written during exceptionally busy times. “Teams” reported no arrivals only twice, while the maximum number in any single week was 10, for November 27, 1875. Almost without exception, the teams took return loads of borax, mostly from Teels Marsh or the Pacific Works. Sometimes they waited a few days to find a load, and on rare occasions they returned empty. The “Teams” counts stayed consistent through the year, indicating the freight line was an all season road.

Figure 6. A typical mining camp freight team. This photograph was taken in Austin.



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Freight teams averaged anywhere from 10 to 15 miles per day, meaning the 130 mile trip from Wadsworth to Columbus would take about ten days to two weeks. “Teams” mentioned one “heavily laden team” which made the trip in 10 days. In 1881, The True Fissure mentions that W. D. Epperson (the only freighter who also appears in the 1875-76 “Teams” columns) makes the trip monthly, hauling general freight and returning with borax. Given the

number of teams in operation, no more than a handful of wagons would pass a given point on the road in the course of a day. This would vary, of course, if teams were traveling in groups, or during times of particularly heavy travel. On June 19, 1880, The True Fissure observed that a load per day of lumber had been arriving in Candelaria, and an August 14 article from the same year mentioned three large freight teams arriving the previous Saturday, “loaded with freight for our merchants.”

The Wadsworth Express operated a stage line on the Wadsworth and Columbus Road, although most stage travel to the Columbus District originated in Carson City, followed the Esmeralda Toll Road as far as Fletcher Station, then headed east on the Aurora-Manhattan Toll Road to Belleville (Map 2). An advertisement in the February 20, 1875, Borax Miner touted the “comfortable and commodious double buggy of the A. J. Holmes Company,” which charged \$20 one-way between Wadsworth to Columbus. The Borax Miner—for some reason never missing an opportunity to criticize the Carson and Columbus Stage, and its operators Teller and Clugage—described the inaugural run of the Wadsworth Express’ six-horse coach in its May 1, 1875, issue:

The first six-horse coach of the Wadsworth express put in a first appearance at Columbus on Wednesday last. Jimmy Peel handled the ribbons with the air of an old stager, and drove his high-toned turn-out about town for the inspection of the citizens. After becoming accustomed to the appearances of the stage sent into this district by the Clugage folks, it is a sort of reminder of the vehicles used by travelers near the haunts of civilization, to see a comfortably appointed covered coach once more, drawn by fine stock and giving a prospect of a pleasant ride over the long road to the Central Pacific.

The 130 mile Wadsworth and Columbus Freight Road passed through an empty, arid landscape. Water and forage were scarce, except along the Carson River between Ragtown and Hill and Grimes. Here, the fertile, well watered ground supported numerous ranches which made it their business to supply the needs of passing travelers. Teams sometimes carried their own feed, or a water tank on a small end trailer, but they also relied on the dozen or so way stations along the route. These consisted mostly of a few stone buildings and corrals, spaced anywhere from four to ten miles apart, where the freighters, stage passengers, and other travelers fed and watered their animals, as well as taking rest and refreshment for themselves. The stations had either springs or shallow wells, or if the location lacked water completely, it was hauled in, often from another station.

In 1876, one of the Wheeler expedition survey teams mapped the Wadsworth and Columbus Freight Road between Ragtown and Dead Horse Well, about 50 miles north of

Columbus. They recorded mileages and information about the route, including brief descriptions of some of the stations (Figure 8). Ragtown, once a major stopping point on the Carson River Route of the California Trail, was in 1876 “a rather dreary looking place, containing only a couple of houses.” To reach Dead Horse Well, the surveyors first traveled east to Austin, south to Ellsworth, and then west to intersect the Wadsworth and Columbus Freight Road (Map 2). They continued north along the road at least as far as Sulphur Spring,

Figure 7. Ruins of
Gillis Station.



William C. Davis

and probably went all the way to Hill and Grimes. They noted a “tolerably good” supply of water at Dead Horse Well, and that water was sold at Deep Hollow for \$1.50 per barrel, (and had to be hauled 14 miles from Dead Horse Well). Water was not good at Sulphur Spring, and had to be brought from the Slough (Hill and Grimes), ten miles away, and the wood used at Sulphur Spring was delivered by freighters making the return trip from Belleville.

The 1870s and early 1880s were successful years for the Columbus District, though not without their ups and downs. The freight business kept pace, as a letter in the June 19, 1880, True Fissure describes:

The continuous stream of freight wagons daily arriving loaded down with all manner and style of goods. The hoarse cries of the teamster, accompanied by the snap of their black-snake whips, combined with the frantic endeavors of pedestrians to steer clear of some fractious hybrid's hind appendage in his eagerness to clear a safe passage for himself completes the picture.

Figure 8. Wheeler Survey notes on the road from Wadsworth to Dead Horse Well.

1942 REPORT OF THE CHIEF OF ENGINEERS.
From Wadsworth, Nev., to Dead-Horse Well.—Atlas-sheets Nos. 43 C & 57 A.

	Distance in miles.			Remarks.
	From Wadsworth to Dead-Horse Well.	From Wadsworth to Dead-Horse Well.	From Wadsworth to Dead-Horse Well.	
Wadsworth	18.72	18.72	18.72	Station 1, P. M. L.
Dead Horse Well	8.45	64.84	64.84	No water at grazing.
Saline	3.87	68.71	68.71	Carson River; little wood; forage purchased.
Saline City Station	3.87	72.58	72.58	Bridge over Carson; little wood; forage purchased.
Saline House	0.08	72.66	72.66	Track; no wood; good grazing.
Mill & Saline	0.47	73.13	73.13	Water; no wood or grass.
Saline Spring	10.20	83.33	83.33	Fair water; no wood or grass.
Saline Well	3.43	86.76	86.76	No wood or water; little grass.
Cox's Station	0.24	87.00	87.00	No wood or water; little grass.
Summit	0.50	87.50	87.50	No wood or water; little grass.
Deep Hollow	1.21	88.71	88.71	No wood or water; little grass.
Dead-Horse Well	23.15	111.86	111.86	Water; no wood or grazing.

The above is the road over which freight is now transported from Saline, Nev., to Dead-Horse Well being about fifty miles from Saline. Water for the use of the stock is hauled to Salt Well, Cox's Station, and Summit, from near Saline Spring, and to Deep Hollow from Dead-Horse Well.

The four marshes—Teels, Columbus, Rhodes, and Fish Lake—continued supplying freighters with cargo for the return trip to Wadsworth. “Borax” Smith consolidated production under his Smith Brothers firm, buying out the Pacific Borax Works Company and the Fish Lake Marsh borax plant. Borax prices rose and fell, with low prices sometimes forcing the closure of the smaller plants. Revived production in the 1880s revitalized the town of Columbus, and in 1883 Smith Brothers opened a new plant in Fish Lake Valley.

Trade between Wadsworth and Columbus was a lucrative business, and it attracted its fair share of attention and envy. Freighters used the Wadsworth and Columbus route because it was the best road available. Merchants in towns other than Wadsworth would have happily made their businesses the source of supplies for the mining district, if only they could persuade the freight wagons to take a different route. Carson City and Dayton provided the most competition. These towns were no further from the Columbus District than Wadsworth. They had their own railroad connection after 1872, when the Virginia and Truckee Railroad completed its link to Reno and the Central Pacific through Washoe Valley. Carson merchants had raised money to build a stage road to the Columbus District, and plans were floated over the next two years for new roads from Mound House and Dayton. But despite their best efforts, the Carson and Dayton merchants never persuaded the teamsters to abandon the Wadsworth and Columbus Road. The large teams with their double and triple trailers could not negotiate the steep grades, canyons, and sharp turns in the Wassuk Range east of Fletcher’s (Map 2). The *Borax Miner* hinted at the tortuous nature of the trip, describing passengers on the Carson City stage arriving in Candelaria “hanging on by tooth and toe-nail.” In contrast, one teamster referred to the Wadsworth Road as “a natural thoroughfare,” because its route followed the valley floors paralleling the north-south mountain ranges, rather

than crossing them (Map 5).

Even if the Carson City and Dayton merchants had persuaded the teamsters, there was still the railroad to deal with. Wagon freight charges were only part of the cost of shipping goods across Nevada and, as the Borax Miner pointed out in its inimitable way, there was no reason to favor the Virginia and Truckee over the Central Pacific:

We all know what an ungodly set of cormorants the managers of the Central Pacific are; but if our shippers ever have the Virginia and Truckee bills to pay, they will learn that the C. P. [Central Pacific] crowd are angels of mercy when compared with the V & T people.

Wagons, Mules, and Teamsters

The teams plying the Wadsworth and Columbus Freight Road presented quite a spectacle, raising clouds of dust as they rumbled along, accompanied by jangling bells and cracking whips. The Nevada State Journal described the scene in Wadsworth, where “huge wagons—two and three chained together—and hauled by sixteen and eighteen

tons) of borax from the Pacific Works, which, with feed and water, makes up a load for a pretty fair team at this season.” In August of 1876 the Benton team “rolls out today with 28,550 pounds of borax.” The whole aggregation—the oxen or mule team, plus double or triple wagons—easily stretched out more than one hundred feet (Figure 9). (Modern eighteen wheelers are about 80 feet long, depending on the type of trailer).



Figure 9. Freight team with triple trailer.

Nevada Historical Society

animals are continually arriving and leaving.” These were the largest wagons on the road at the time. Their enormous, canvas topped boxes were 16-18 feet long and four and a half feet wide. The removable side boards could form a box up to six feet deep. They carried three tons or more, including everything from basic supplies to heavy machinery. Entire stamp mills were often broken down and shipped to future mill sites piece by piece. With multiple wagons, the total tonnage could reach double digits, as the Borax Miner attested. The November 27, 1875, “Teams” column notes “Billy Pearson brought freight to Columbus and took 35,000 pounds (17½

A number of companies manufactured the freight wagons which supplied mining camps throughout the West (Figure 10). The Studebaker Brothers Manufacturing Company, of South Bend, Indiana, was the most prominent, along with the Joseph Murphy company of Saint Louis. (The Studebaker Company developed into a well-known automobile maker in the twentieth century.) John Studebaker, one of the five Studebaker brothers, set up a wagon factory in Placerville, California, during the Comstock rush. It specialized in building the Washoe Wagon, a huge freight hauler with an extra sturdy, oversize frame and box, and powerful

brakes. These wagons made their mark carrying freight and mining and milling equipment across the Sierra Nevada Mountains. Difficulties in obtaining supplies of seasoned hardwood forced Studebaker to return to South Bend after a few years, but Studebakers remained the leading freight wagon on western roads.

and endurance, but made up for it with speed. Hitched together in large teams, mules could also pull any size load. The choice between oxen and mules boiled down to how quickly the cargo had to reach its destination, which gave the advantage to the mule teams on the road to the mining camps. The substantial investments made in mining and milling

Figure 10.
Examples of
restored freight
and farm wagons.



Brenda Grant, BG Stables

Freighters also debated the superiority—or inferiority—of horses, oxen, and mules as draft animals. Horses were less suited for sustained, heavy work in the high deserts traversed by the Wadsworth and Columbus Freight Road, although they did well pulling stagecoaches or other light vehicles. Horses also required a better diet than sparse, desert grass, and way stations along the road had to be stocked with grain for them. Oxen and mules both excelled at pulling heavy loads for mile after mile, with speed the telling difference between them. Oxen were slow, but also inexpensive and readily available. They were large, mature cattle, usually male, selected for their stoutness and strength, as well as being docile and less likely to stampede than mules. Mules lacked the oxen's strength

equipment remained worthless until the machinery went to work producing bullion, and camp merchants competed fiercely to fill their customers' needs, the quicker the better.

A freighter's typical crew consisted of the driver, variously known as a "skinner," "bullwhacker," or "mule skinner," and at least one "swamper," usually a boy or less experienced hand who served as an all around helper. The skinner either rode on the wagon seat, walked alongside the team, or rode the saddled "near wheeler," (the left hand animal in the pair closest the wagon). A red flannel shirt, jeans, and boots made up the teamster's wardrobe. Richard Burton, a well known explorer and author, observed on his trip across the Central Route in 1860 that some teamsters

wore large green goggles, and darkened the skin around their eyes with lamp black as protection against the desert sun.

Mule teams consisted of up to 24 animals, often with a pair of horses, or “wheelers,” hitched first in line to the wagon tongue. The mules in front of the wheelers were the “pointers.” The next pair were the “sixes,” then the “eights,” “tens,” “twelves,” etc., to the lead animals.

Teams of more than three or four pairs were managed with a “jerk line” rather than reins. This was a long rope hooked to the bit of the

near leader, and strung through rings in the collars of the column of near side animals. A steady tug by the skinner on the “jerk line” pulled the near leader’s head to the left, and as the animal turned it drew the rest of the team along. A series of short jerks slapped the line against the leader’s neck, prompting him to turn right. The animals pulled the wagon forward on a long chain, running between them and hooked to their harnesses. Much of the teamster’s skill, and the animals’ training, came into play descending steep grades or negotiating turns without tangling the long train of animals in their own traces.

The Production and Marketing of Borax

Borax from the Columbus District marshes (known as playas when they are dry) occurred as the mineral ulexite in beds of rounded, loosely packed "cottonballs." Borax accumulated in the desert valley floors, where spring water percolated up through alluvial fans at the edges of the salt flats. Mining borax required nothing more than a shovel.

Borax processing also was relatively uncomplicated. Workers dug the "cottonballs" from shallow pits, or raked them into windrows on the playa surface, shoveled them into wagons and hauled them to the concentrators. Concentrators were large, water-filled iron pans set on rock or brick foundations and heated with wood fires, or they were wooden tanks heated with steam pipes. The solution of water, "cottonballs," and whatever sediment had accidentally been included, was brought to a boil, dissolving the borax. The resulting "liquor" was poured off into cooling tanks, and the borax crystallized on the sides and bottoms of the tanks, and on metal wires, rods, or plates submerged in the solution. Crystallization took anywhere from 10 to 14 days. The workers then drained the tank, knocked the borax crystals loose, and shoveled it into bags for shipment.

Borax production from the Columbus Mining District went hand in hand with the transformation of the mineral from an obscure chemical to a common industrial and household

product. In the mid 1800s, blacksmiths used borax as a flux, to promote the fusion of metals, and druggists used it to treat ulcerations and other skin diseases. By the 1880s new uses had been found for borax in the manufacture of glue, paint, leather, and textiles, but it was marketed most successfully as a detergent and mild disinfectant. "Borax" Smith, recalling his career, said, "I have lived to see borax become an important article of commerce, and, by reason of great reduction in price, a household staple of universal use." The tons of borax brought to the world market from the Columbus area marshes via the Wadsworth and Columbus Freight Road and the Central Pacific Railroad made this price reduction possible. No effort was spared finding and promoting new uses for borax, and none of these freshly created needs could have been satisfied without sufficient supplies at affordable prices.

A letter reprinted in the Borax Miner in January, 1876, records the beginnings of this marketing effort. The writer, an Englishman named Arthur Robottom, had collected samples of borax from Nevada and California. He wrote, from Birmingham:

The virtues of borax are not yet known to many scientific men in Europe and America; but when the uses of borax can be understood by the great mass of the people, a much more extended consumption will be the result.

He listed no fewer than a dozen domestic applications for borax, from "a splendid hair

wash” to bug killer, fungicide, and—by adding only a few drops—a preservative for milk. He also praised borax as a detergent additive, which eventually became its most common household use:

Two ounces boiled in twelve gallons of water for washing will make the

clothes cleaner and whiter than soda or washing powders, and does not injure or rot the material; the colors in prints are not the least affected when washed in borax; it saves half the soap, and best of all, it does not hurt the washerwoman’s hands, but heals any sores.

Figure 11. Cover of Borax: The Magic Crystal, published in the early 1900s by the Pacific Borax Company.



University of Denver Special Collections and Archives

Figure 12. Smith Brothers Borax.



Bill Nale

Uses and directions from the Smith Brothers box:

Washing—Dissolve one heaping Tablespoon of Borax in hot water for every tub full of cloths; soap all of the most soiled places, and rub on the board through one water; after rubbing, throw the pieces into a tub containing boiling water and Borax; let them remain there while the second tub of cloths is being washed; rinse in one plain water; do not boil the clothes.

In washing flannels use one tablespoon of Borax to five gallons of water, with a little soap. It will make them soft and clean without shrinking.

Starching—One teaspoon of Borax to one pint boiling starch adds greatly to the gloss - a fact not generally known.

To Prevent Moths—Sprinkle the floor with the powder before laying down the carpets, and put it with the clothes when packed away.

Removing Cockroaches—Sprinkle floor, leaving places open for escape; or to kill them add one part Borax to two parts powdered sugar.

Arresting Fermentation—One half thimbleful Pulverized Borax to one quart cream or milk will preserve them perfectly sweet.

Rough Face or Chapped Hands—One Table spoonful Pulverized Borax to one quart hot water; apply night and morning with soft sponge or cloth.

Shampooing—One teaspoon Pulverized Borax to teacup full hot water; apply and rub hard until lather is produced; then rinse with cold water, and be sure the hair is dry before combing.

LIVE BY THE RAILROAD, DIE BY THE RAILROAD

The Wadsworth and Columbus Freight Road played a specific role in Nevada transportation for 10 years. It kept the Columbus District supplied with merchandise and equipment, and started the district's borax on its way to the world market. The freight road's part in the larger system stayed remarkably constant, even though The True Fissure and the Borax Miner recorded a drop from 28 active teams in the mid 1870s to 12 outfits and 48 wagons in 1881. It was the best connection between the Columbus District and Wadsworth, and from there to the world. But the same change and progress in the transportation network which first opened the way for the Wadsworth and Columbus Freight Road brought its 10 year run to an end.

The 1881 History of Nevada, in the section describing Wadsworth, made an interesting observation:

As long as those points [Columbus, Belmont, Ellsworth] are supplied by freight wagons, Wadsworth will retain the bulk of the traffic; but as soon as one of the proposed railroads invades that region, the freighting business will materially decline.

The "invasion" happened in December of 1881. The Carson and Colorado Railroad—a narrow gauge line being built from Mound House to Fort Mohave, on the Colorado River—reached Belleville. A few weeks later, in February of 1882, a spur line arrived at Candelaria (Maps 3 and 5).

The Carson and Colorado made connections with the standard gauge Virginia and Truckee at Mound House, where passengers and freight had to change trains. The Virginia and Truckee continued on to Reno, completing the link to the Central Pacific. The builders of the Carson and Colorado not only targeted the Columbus District, but saw their railroad stimulating development of other mining districts in southwestern Nevada and southeastern California. Railroads brought relatively cheap, efficient transportation to the region, making it affordable to ship special equipment for mining deep ore bodies, or processing complex ore. They also made mining lower grade ore profitable, since it could be transported in bulk to specialty mills and smelters. Last but not least, the railroad transported bullion beyond the reach—at least most of the time—of the bands of robbers who regularly preyed upon the stage lines. The Carson and Colorado never did get to the Colorado River, but it eventually reached Hawley, California, 293 miles from Mound House.

With the Carson and Colorado in place, the 130 mile trip to Wadsworth became suddenly pointless, nor was anyone sentimental about the loss of their freight road. In September of 1880, with the railroad still more than a year away, a general merchandise wholesaler and retailer named W. S. Stone advertised that his establishment was "Getting Ready for the



Figure 13. The Candelaria Depot in 1895.

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Railroad," with all merchandise available at "Down to Railroad Prices!" The citizens of Belleville celebrated the much anticipated arrival of train service on New Year's Day, 1882. The True Fissure hailed the railroad as the savior of the region, proclaiming "the day of deliverance is here."

The Carson and Colorado never lived up to the grand designs of its builders, but it terminated the Wadsworth and Columbus Freight Road's role as a long haul freight route. The Columbus District went into a decline in the mid 1880s. The last good year in the mines was 1883. The Northern Belle became entangled in a lawsuit brought by A. J. Holmes, alleging underground trespass on veins he had claimed. Holmes won the suit and the Northern Belle defaulted on the judgment. The mine went into receivership and was taken over by the Holmes Mining Company. The new owners were not enthusiastic about operating the mine which had, it was rumored, almost exhausted its ore. Production through the rest of the decade was sporadic, and the Holmes mine, along with the Mount Diablo, ceased production in 1891.

The borax industry in the Columbus District withered away as well. Market prices dropped starting in 1887, when large quantities of borax began to be imported from Italy. A new form of borax, called Colemanite, was also discovered in the Death Valley area in the early 1890s. Colemanite had to be mined from sedimentary rock, but it was a much richer borax source than the marsh deposits, and forced the abandonment of production in the Columbus District.

The long freight runs from Wadsworth to the Columbus District became a thing of the past, but wagon freighting to the Nevada interior remained vital to the state's transportation network. In places, only the railhead changed. Candelaria was revitalized during the 1901-04 Tonopah boom, as one of the closest points on the Carson and Colorado to the new mining camps. The Tonopah and Goldfield Railroad soon followed, however, replacing the wagon roads and relegating Candelaria once again to ghost town status.

The brief Rawhide rush, which came and went between March 1907 and the end of 1909, was actually centered on the old Wadsworth and Columbus Freight Road about eight miles north of Dead Horse Well (Map 5). The town of Rawhide spread out on either side of the freight road, renamed Nevada Street (Figure 14). Automobiles, stages, and freight wagons jammed the street at the height of the boom, when the town's population peaked at about 7,000. The Shurz railhead, 25 miles west, was Rawhide's main link to the outside world, but auto stages made daily trips north to Fallon and south to Luning on the old freight road.

Mines, mills, and camps continued to spring up in the mountains east and west of the Wadsworth and Columbus Freight Road throughout the twentieth century. The motorized trucks which replaced the freight wagons used sections of the old road just as before, bringing in equipment and supplies and hauling out ore, bullion, or other mineral products. Dead Horse Well, for example, was the site of a small milling operation during the 1930s and 40s. Eventually, US Highway 95 and State Route 361 (Map 1) incorporated the southern portion of the Wadsworth and Columbus road into the modern highway system, from a few miles north of Luning to Tonopah Junction.

Figure 14. The ruins of Rawhide in 1951, on the old Wadsworth and Columbus Freight Road.



Special Collections, University of Nevada-Reno Library, Gus Bundy Collection

Figure 15. Vulcan Power Company geothermal drill rig in the Salt Wells area.

Discovering the Wadsworth and Columbus Freight Road

Vulcan Power Company, Inc. of Bend, Oregon, is developing new geothermal energy sources in the area of Salt Wells and the northern Bunejug Mountains, 15 miles southeast of Fallon, Nevada. Geothermal energy provides a substantial and growing share of Nevada's alternative electrical power. It is produced from natural steam, formed when ground water comes into contact with the intense heat of the earth's interior. Salt Wells and the Bunejugs have long been recognized for their energy potential, and five geothermal power plants currently draw power from the region.

Vulcan's Salt Wells Project is located on public land, and conforms to federal environmental



Vulcan Power Company, Inc.

regulations. These address a wide range of environmental concerns, including any damage or disturbance the project might cause to cultural resources. Before work began on the planned exploratory wells and access roads, an archaeological survey team from MACTEC Engineering and Consulting, Inc., under



Mactec Engineering and Consulting, Inc..

Figure 16. The Wadsworth and Columbus Freight Road as recorded during the cultural resource survey.

Figure 17. Fragments of an imported German ceramic water jug found near the freight road.

The embossing reads “...O.SELT.../.SSA...” It originated from a well at Selters, in the Duchy of Nassau, and was manufactured between 1867 and the 1880s.



Mactec Engineering and Consulting, Inc.

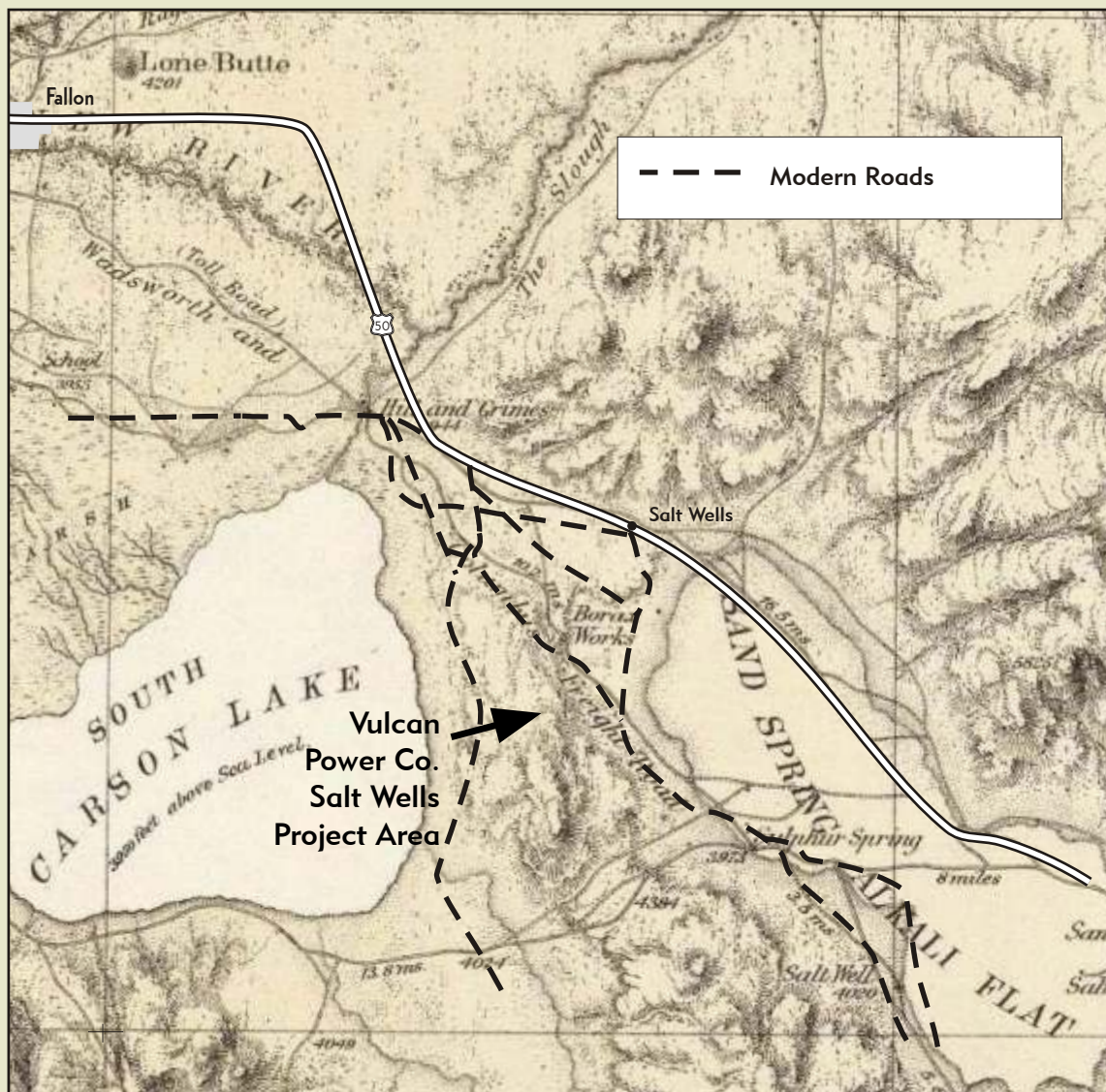
contract with Tetra Tech, Inc., conducted a cultural resource survey to identify and evaluate any prehistoric or historic archaeology sites in the project area.

The cultural resource survey identified several important archaeological sites, including a prehistoric campsite and a historic borax processing plant. Fortunately, all but one of the sites were avoided by moving the proposed drill sites and access roads. One site, a 1.6 mile long segment of historic wagon road, could not be avoided. It needed to be graded and graveled to provide access to several critically important drilling locations.

Many two-track dirt roads criss-cross the project area. But during the survey, archaeologists noticed a scatter of old tin cans, broken bottles, and other historic artifacts—including a small, hand forged metal wagon part—along one of the roads. The cans and bottles were manufactured in the late 1800s, and one bottle base and a ceramic

water jug dated to the 1860s (Figure 17). When compared to several nineteenth century maps, the road’s location matched a section of road on an 1881 General Land Office survey map, and the “Wadsworth and Columbus Freight Road” on an 1876 Wheeler Survey map (Map 6).

The archaeologists had discovered a historic freight road, and their research into both nineteenth century sources and other modern studies showed the Wadsworth and Columbus Freight Road played a significant part in Nevada transportation and mining history. Once the segment within the Vulcan Project was graded and graveled, it would no longer resemble the old freight road or contribute to that history. This article, which explains the historic importance of the Wadsworth and Columbus Freight Road, helps to mitigate—or compensate for—that loss.



David Rumsey Map Collection, www.davidrumsey.com

Map 6. Modern Roads Superimposed over the 1876 Wheeler Survey Map.

FROM FREIGHT WAGONS TO DRILL RIGS

Nevada transportation history is the story of how different ways of traveling and hauling goods from one place to another—from emigrant wagons to steam locomotives—all had their moment, made their mark, and then were swept up in the next chapter. For ten years, as history unfolded around it, the Wadsworth and Columbus Freight Road survived unchanged. Its fundamental soundness protected it against competition. It occupied the best route and its teams operated with maximum efficiency, making a profit delivering freight and returning to Wadsworth loaded with borax. But it was also a link within a wider, interrelated system, where any change in one part led always to change in the others. The Wadsworth and Columbus Freight Road began when the transcontinental railroad literally opened a new avenue for freight hauling. The avenue closed when another railroad reached out and took the freight road's destination for its own. The Wadsworth and Columbus Road then adapted in its own way to the next 125 years of changing times. One hundred years ago auto stages drove back and forth on it between Rawhide and Fallon, and now its route carries cars and trucks between Luning and Tonopah Junction. Along the northeast slope of the Bunejug Mountains, between the old Hill and Grimes and Salt Well stations, geothermal drill rigs are exploring for new energy sources. The trucks hauling the rigs and their equipment and supplies drive to the drill sites along the Wadsworth and Columbus Freight Road. Once again, the road plays a part in bringing a precious commodity from beneath the surface of the earth—not silver this time, but energy.

SUGGESTED READING

The Wadsworth/Columbus Freight Route by William C. Davis (AuthorHouse, 2007)

This is the only book available dealing specifically with the Wadsworth and Columbus Freight Road. Bill Davis is an archaeologist who has lived and worked in the western Great Basin for many years. His book takes an archaeological approach to the freight road, following its route and describing the archaeological remains along the way. It is the book to have for the four-wheeler who wants to follow the tracks of the old freight wagons. Available from the Churchill County Museum and Archives, Fallon, Nevada.

Candelaria and Its Neighbors by Hugh A. Shamberger (Nevada Historical Press, 1978)

This book is a detailed and well illustrated account of the Columbus Mining District. It includes descriptions of towns, mines and mills, and the borax industry along with modern photos of historic locations. The Wadsworth and Columbus Freight Road is briefly described in the section on stage and freighting lines.

The True Fissure and the **Borax Miner**

These weekly newspapers, published in Columbus and Candelaria between 1873 and 1886, are excellent sources of information about day to day life in the Columbus Mining District. They are available on microfilm at the Nevada State Library and Archives, Carson City, Nevada, as well as other university and historical society libraries.

McGee Station by Roberta Childers (Jamison Station Press, 1985)

Pioneer history of the Fallon area, including stories of the settlers and early ranchers along what became the Wadsworth and Columbus Freight Road between Ragtown and Hill and Grimes. Available from the Churchill County Museum and Archives, Fallon, Nevada.

Wheels West 1590-1900 by Richard Dunlop (Rand McNally and Company, 1977)

This is a general history of wagon transportation in the West. It does not focus specifically on Nevada, but follows transportation development through the explorers and emigrants, the frontier army, mining and settlement, and the coming of the railroads. It is profusely illustrated and also includes descriptions of the array of vehicles—from Mexican carretas to Concord coaches—which traveled the western roads.